CLAIMS

What is claimed is:

1. An apparatus comprising:

a set of registers corresponding to computed brightness values to store data indicating a number of pixels of an image having respective computed brightness values, each register having an associated saturation threshold value; and

an image brightness agent communicatively coupled with the set of registers to determine whether a register is saturated and to redistribute computed brightness values to one or more non-saturated registers.

2. The apparatus of claim 1 further comprising a color look-up table coupled with the image brightness agent, the image brightness agent to modify the color look-up table based on computed brightness values stored in the registers.

3. The apparatus of claim 2 wherein the registers store brightness histogram values.

4. The apparatus of claim 2 further comprising a backlight control agent communicatively coupled with the image brightness agent, the backlight control agent to modify backlight brightness based on modifications to the color look-up table.

5. The apparatus of claim 1 wherein one or more of the saturation threshold values comprises a largest number to be stored by the associated register.

6. The apparatus of claim 1 wherein one or more of the saturation threshold values comprises number less than a largest number to be stored by the associated register.

7. The apparatus of claim 1 wherein the image brightness agent comprises a processor executing sequences of instructions.

8. The apparatus of claim 1 wherein the image brightness agent comprises control circuitry communicatively coupled with the set of registers.

9. The apparatus of claim 1 further comprising a backlight control agent communicatively coupled with the set of registers and the image brightness agent, the backlight control agent to control backlight intensity.

10. The apparatus of claim 9 further comprising an ambient light sensor coupled with the image brightness agent to generate an indication of ambient light level.

11. The apparatus of claim 9 wherein the image brightness agent modifies a color look-up table based on the indication of ambient light level.

12. The apparatus of claim 11 further comprising a backlight control agent communicatively coupled with the set of registers and the image brightness agent, the

backlight control agent to control backlight intensity in response to modifications to the color look-up table.

13. A method comprising:

storing, in a plurality of registers, an indication of a number of pixels in an image having a computed brightness value corresponding to the respective registers; and

redistributing a subset of computed brightness values corresponding to one or more registers if the computed brightness value for the register exceeds a threshold value.

14. The method of claim 13 further comprising modifying a color look-up table based on values stored in the registers.

15. The method of claim 14 further comprising modifying a display device backlight intensity based on the modifications to the color look-up table.

16. The method of claim 13 wherein the computed brightness values correspond to brightness histogram values.

17. The method of claim 13 wherein the saturation threshold value comprises a largest number to be stored in a register.

18. The method of claim 13 wherein the saturation threshold value comprises a value less than a largest number to be stored in a register.

19. The method of claim 13 further comprising:

receiving ambient light information from an ambient light sensor and modifying a color look-up table based on the ambient light information; and

modifying a display device backlight intensity based on the modifications to the color look-up table.

20. An article comprising a machine-readable medium having stored thereon instruction that, when executed by one or more processors, cause the one or more processors to:

store, in a plurality of registers, an indication of a number of pixels in an image having a computed brightness value corresponding to the respective registers; and

redistribute a subset of computed brightness values corresponding to one or more registers if the computed brightness value for the register exceeds a threshold value.

21. The article of claim 20 further comprising instructions that, when executed, cause the one or more processors to modify a color look-up table based on values stored in the registers.

22. The article of claim 21 further comprising instructions that, when executed, cause the one or more processors to modify a display device backlight intensity based on the modifications to the color look-up table.

23. The article of claim 20 wherein the computed brightness values correspond to brightness histogram values.

24. The article of claim 20 wherein the saturation threshold value comprises a largest number to be stored in a register.

25. The article of claim 20 wherein the saturation threshold value comprises a value less than a largest number to be stored in a register.

26. The article of claim 20 further comprising instructions that, when executed, cause the one or more processors to:

receive ambient light information from an ambient light sensor and modifying a color look-up table based on the ambient light information; and

modify a display device backlight intensity based on the modifications to the color look-up table.

27. A system comprising:

a set of registers corresponding to computed brightness values to store data indicating a number of pixels of an image having respective computed brightness values, each register having an associated saturation threshold value;

an image brightness agent communicatively coupled with the set of registers to determine whether a register is saturated and to redistribute computed brightness values to one or more non-saturated registers; and

a flat panel display device coupled to display the image.

28. The system of claim 27 further comprising a color look-up table coupled with the image brightness agent, the image brightness agent to modify the color look-up table based on computed brightness values stored in the registers.

29. The system of claim 28 wherein the registers store brightness histogram values.

30. The system of claim 28 further comprising a backlight control agent communicatively coupled with the image brightness agent, the backlight control agent to modify backlight brightness based on modifications to the color look-up table.

31. The system of claim 27 wherein one or more of the saturation threshold values comprises a largest number to be stored by the associated register.

32. The system of claim 27 wherein one or more of the saturation threshold values comprises number less than a largest number to be stored by the associated register.

33. The system of claim 27 further comprising a backlight control agent communicatively coupled with the set of registers and the image brightness agent, the backlight control agent to control backlight intensity.

34. The system of claim 33 further comprising an ambient light sensor coupled with the image brightness agent to generate an indication of ambient light level.

35. The system of claim 33 wherein the image brightness agent modifies a color look-up table based on the indication of ambient light level.

36. The system of claim 35 further comprising a backlight control agent communicatively coupled with the set of registers and the image brightness agent, the backlight control agent to control backlight intensity in response to modifications to the color look-up table.

37. A method comprising:

determining an image brightness profile for an image to be displayed on a display device having an adjustable backlight source; and

modifying an intensity of light provided by the adjustable backlight source based on the brightness profile.

38. The method of claim 37 wherein determining the image brightness profile comprises computing a brightness histogram indicating a number of pixels having associated computed brightness values.

39. The method of claim 38 further comprising storing the computed brightness values in a set of registers, wherein a number of pixels in the image to be displayed exceeds a storage capacity of one or more of the registers, and further wherein one or more of the registers has an associated threshold value.

40. The method of claim 39 further comprising redistributing a subset of computed brightness values corresponding to a selected register if a number of computed brightness values to be stored in the selected register exceeds the threshold value for the selected register.

41. The method of claim 37 further comprising modifying a color look-up table based on the brightness profile.

42. An apparatus comprising:

an image brightness agent to analyze pixels of an image to be displayed on a display device having an adjustable backlight source and to generate an image brightness profile; and

a backlight control circuit coupled with the image brightness agent to dynamically adjust an intensity of light provided by the adjustable backlight source based on the image brightness profile.

43. The apparatus of claim 42 further comprising a display device including the adjustable backlight source, wherein the adjustable backlight source is coupled with

the backlight control circuit to provide the intensity of light corresponding to signals received from the backlight control circuit.

44. The apparatus of claim 42 wherein the image brightness agent computes a brightness histogram indicating a number of pixels having associated computed brightness values.

45. The apparatus of claim 44 further comprising a set of registers to store computed brightness values corresponding to pixels in the image to be displayed, wherein one or more of the registers has an associated threshold value, and further wherein a storage capacity of one or more of the registers is less than a number of pixels analyzed by the image brightness agent.

46. The apparatus of claim 45 wherein the image brightness agent redistributes a subset of computed brightness values corresponding to a selected register when a number of computed brightness values to be stored in the selected register exceeds the threshold value associated with the selected register.

47. An article comprising a computer-readable medium having stored thereon instructions that, when executed, cause one or more processing devices to:

determine an image brightness profile for an image to be displayed on a display device having an adjustable backlight source; and

modify an intensity of light provided by the adjustable backlight source based on the brightness profile.

48. The article of claim 47 wherein the instructions that cause the one or more processing devices to determine the image brightness profile comprise instructions that, when executed, cause the one or more processing devices to compute a brightness histogram indicating a number of pixels having associated computed brightness values.

49. The article of claim 48 further comprising instructions that, when executed, cause the one or more processing devices to store the computed brightness values in a set of registers, wherein a number of pixels in the image to be displayed exceeds a storage capacity of one or more of the registers, and further wherein one or more of the registers has an associated threshold value.

50. The article of claim 49 further comprising instructions that, when executed, cause the one or more processing devices to redistribute a subset of computed brightness values corresponding to a selected register if a number of computed brightness values to be stored in the selected register exceeds the threshold value for the selected register.

51. The article of claim 47 further comprising instructions that, when executed, cause the one or more processing devices to modify a color look-up table based on the brightness profile.

52. A system comprising:

a flat panel display device having an adjustable backlight source;

an image brightness agent to analyze pixels of an image to be displayed on the display device and to generate an image brightness profile; and

a backlight control circuit coupled with the image brightness agent to dynamically adjust an intensity of light provided by the adjustable backlight source based on the image brightness profile.

53. The system of claim 52 wherein the image brightness agent computes a brightness histogram indicating a number of pixels having associated computed brightness values.

54. The system of claim 53 further comprising a set of registers to store computed brightness values corresponding to pixels in the image to be displayed, wherein one or more of the registers has an associated threshold value, and further wherein a storage capacity of one or more of the registers is less than a number of pixels analyzed by the image brightness agent and further wherein the image brightness agent redistributes a subset of computed brightness values corresponding to a selected register when a number of computed brightness values to be stored in the selected register exceeds the threshold value associated with the selected register.